We claim:

1. A method for determining the presence of hypochlorous acid in vaginal secretions comprising measuring the presence and amount of 3-chlorotyrosine in the vaginal secretions.

2. A method for determining the likelihood of preterm premature rupture of fetal membranes or preterm labor in a pregnant female comprising the steps of:

obtaining a sample of vaginal secretions from the female; and

analyzing the sample for the presence and amount of hypochlorous acid by measuring the amount of 3-chlorotyrosine in the sample.

3. A method for therapeutically treating a pregnant female to minimize the likelihood of preterm premature rupture of fetal membranes or preterm labor comprising the steps of:

obtaining a sample of vaginal secretions from the female;

measuring the presence and amount of 3-chlorotyrosine in the vaginal secretions wherein an increased amount of 3-chlorotyrosine represents an increased likelihood of preterm premature rupture of fetal membranes or preterm labor; and

administering an amount of dietary antioxidant to the female if the likelihood is increased.

4. The method of Claim 3, wherein the dietary antioxidant is selected from the group consisting of vitamin C and vitamin E.

5. A method for determining the presence of hypochlorous acid in female vaginal secretions comprising measuring the presence and amount of 3-chlorotyrosine in the vaginal fluid using an ELISA assay.

6. A novel hapten for raising antibodies to 3-chlorotyrosine, said hapten comprising 3-(3-chloro-4-hydroxy-benzyl)-6-mercaptomethyl-piperazine-2,5-dione.

7. A neoantigen for raising antibodies to 3-chlorotyrosine comprising a carrier protein bound to the hapten of Claim 6 by way of a covalent linkage.

8. The neoantigen of Claim 7, wherein the carrier protein is selected from the group consisting of bovine serum albumin, keyhole limpet hemocyanin and thyroglobulin.

9. The neoantigen of Claim 7, wherein the covalent linkage includes a sulfur atom.

10. A method for raising antibodies to 3-chlorotyrosine comprising the use of an antigen formed by covalently linking 3-(3-chloro-4-hydroxy-benzyl)-6-mercaptomethyl-piperazine-2,5-dione to a carrier protein.

11. The method of Claim 10, wherein the carrier protein is selected from the group consisting of bovine serum albumin, keyhole limpet hemocyanin and thyroglobulin.

12. A method for raising antibodies to 3-chlorotyrosine comprising using an antigen formed by covalently linking N-acetyl-3-chlorotyrosine to a carrier protein.

13. The method of Claim 12, further comprising using an antigen formed by covalently linking N-acetyl-3,5-dichlorotyprosine to a carrier protein.

14. The method of Claim 12, wherein the carrier protein is selected from the group consisting of bovine serum albumin, keyhole limpet hemocyanin and thyroglobulin.